

## Correction. Developmental Times and Life Table Statistics of Aulacorthum solani (Hemiptera: Aphididae) at Six Constant Temperatures, with Recommendations on the Application of Temperature-Dependent Development Models

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Correction. In the article, "Developmental Times and Life Table Statistics of *Aulacorthum solani* (Hemiptera: Aphididae) at Six Constant Temperatures, With Recommendations on the Application of Temperature-Dependent Development Models" by S. E. Jandricic, S. P. Wraight, K. C. Bennett, and J. P. Sanderson, published in Environmental Entomology, Volume 39, Number 5, October 2010, pp. 1631–1642, the following corrections are noted.

Tables 2 and 8: The values for reproductive rate  $(R_o)$ , intrinsic rate of increase  $(r_m)$ , and subsequently doubling time (DT) and generation time (GT), were incorrectly calculated for *Aulacorthum solani* due to an error in application/summation of the Euler equation. These incorrect values were reported in Tables 2 and 8 and also appeared in the text of the abstract, results, and discussion sections. Tables with the corrected  $r_m$ , DT, GT and  $R_o$  values are reprinted here (with the inclusion of  $r_m$ ,  $R_o$  and mean total adult fecundity at 30° C, which were not presented in the original paper). Additionally,  $r_m$ , DT and  $R_o$  were incorrectly reported for the Lee et al. (2008a,b) reference at 25 °C in Table 2; these values have also been corrected in the reprint of Table 2. In light of these errors, the last 2 sentences in the 7<sup>th</sup> paragraph of the discussion section (pg. 1640) should be disregarded.

Additionally, we restate, for the sake of clarity, that  $m_x$  (mean number of offspring per surviving aphid based on age from birth) was used in the calculation of  $r_m$  in the Euler equation, despite our visual presentation of fecundity based on age of adult aphids (day of adulthood) in Figure 3.

Table 3. The total nymphal mortality of *Aulacorthum solani* reared at 10° C was incorrectly reported to be 33.33% in Table 3 and in the text of the results section. The correct total nymphal mortality at this temperature is 18.52%, as only 5 aphids died during nymphal development (not 9, as reported in Table 3). However, the proper mortality data (censored for missing aphids) was used in the survival curve (Figure 2); therefore this figure is correct as is. Furthermore, the correct nymphal morality was also used in the life table calculations (with missing aphids removed from the data prior to analysis).

Table 7. We would further like to clarify that the mean total fecundity at different temperatures presented in Table 7 (and also in Table 2, which compares our study with others) are the *least squared means* (i.e. adjusted means) of total offspring produced per adult aphid. In SAS, the least squared means were used in the general linear model and Tukey-Kramer test on multiple means due to an unbalanced design. Therefore, these numbers differ slightly from the arithmetic means (which were 74.59, 75.55, 69.42, 38.64 and 0.50, respectively, for 10, 15, 20, 25 and 30°C).

The authors would sincerely like to thank H. Chi for his contributions to the corrections of the errata.

 $\label{eq:conditional} \textbf{Table 2.} \quad \textbf{Mean total developmental times ($\pm SE$), intrinsic rate of increase $(r_m)$, net reproductive rate $(R_o)$, mean total fecundity, }$ and doubling times (DT) of A. solani reared on various crops

Temperature (°C)	Crop	n	Total developmental time (days)	$r_m$	$R_o$	Total fecundity	DT (d)	Reference	
2.0	Potato	41	$0^a$	_	_	_	_	Pozarowska 1987	
5.0	Potato	50	$63.15 \pm 1.08$	_	_	45.3	_	Pozarowska 1987	
10.0	Pansy	32	$21.8 \pm 0.36$	0.0955	60.8	74.4	7.26	This study	
	Pepper	$100^{b}$	$16.7 \pm 0.24$	0.1240	59.2	_	5.59	Vasicek et al. 2001	
	Soybean	20	$20.2 \pm 4.50$	_	_	_	_	Kim et al. 1991	
	Lettuce	$20^{c}$	$23.7 \pm 0.43$	0.078	29.8	_	8.89	Vasicek et al. 2003	
	Eggplant	$20^{c}$	$21.8 \pm 0.62$	0.089	42.0	_	7.79	Vasicek et al. 2003	
	Pea	$20^{c}$	$18.8 \pm 0.58$	0.079	10.2	_	8.76	Vasicek et al. 2003	
	Fennel	$20^{c}$	$23.8 \pm 0.50$	0.083	30.7	_	8.37	Vasicek et al. 2003	
12.5	Lettuce	30	$16.9 \pm 0.15$	0.1292	36.3	_	5.37	Lee et al. 2008a, b	
15.0	Pansy	32	$11.4 \pm 0.26$	0.1820	75.6	74.9	3.81	This study	
	Lettuce	30	$10.3 \pm 0.15$	0.2284	58.7	_	3.04	Lee et al. 2008a, b	
	Soybean	20	$13.4 \pm 2.6$	_	_	_	_	Kim et al. 1991	
17.5	Lettuce	30	$7.9 \pm 0.13$	0.2631	35.4	_	2.63	Lee et al. 2008a, b	
20.0	Pansy	32	$8.4 \pm 0.30$	0.2394	64.5	68.4	2.90	This study	
	Lettuce	30	$7.2 \pm 0.13$	0.2747	33.8	_	2.52	Kim et al. 1991	
	Potato	50	$7.9 \pm 0.06$	_	_	84.8	_	Pozarowska 1987	
	Soybean	20	$7.8 \pm 1.20$	_	_	_	_	Kim et al. 1991	
22.5	Lettuce	30	$6.6 \pm 0.14$	0.2625	17.9	_	2.64	Lee et al. 2008a, b	
avg. 22.6	Potato	37	$9.3^{d}$	_	_	60.3	_	MacGillivray and Anderson 1958	
25.0	Pansy	32	$6.9 \pm 0.29$	0.2478	37.2	39.1	2.80	This study	
	Lettuce	30	$7.4 \pm 0.30$	0.1794	8.2	_	3.86	Lee et al. 2008a, b	
	Soybean	20	$7.0 \pm 1.0$	_	_	_	_	Kim et al. 1991	
27.5	Lettuce	30	$0^a$	_	_	_	_	Lee et al. 2008a, b	
30.0	Pansy	32	$9.5 \pm 0.83^{e}$	-0.2367	0.074	1.89	f	This study	
	Soybean	20	$0^a$	_	_	_	_	Kim et al. 1991	
35.0	Pansy	32	$0^a$	_	_	_	_	This study	

<sup>&</sup>lt;sup>a</sup> All nymphs died before reaching adulthood at this temperature.

Table 8. Life table statistics of A. solani reared at differing temperatures

Temperature (°C)	$r_m$	$R_o$	GT	DT	
10	0.0955	60.7778	43.0211	7.2603	
15	0.1820	75.5517	23.7627	3.8085	
20	0.2394	64.4642	17.4023	2.8953	
25	0.2478	37.1538	14.5887	2.7972	
30	$-0.2367^{a}$	0.07407	_	_	
35	<i>b</i>	_	_	_	

b Data for 1 cohort (out of 4) were randomly chosen, as there were no significant differences among cohorts.  $^c$  Data were chosen from the best performing cohort ( of two cohorts).

 $<sup>^</sup>d$  No SE available.

<sup>&</sup>lt;sup>e</sup> Based on 4 nymphs that developed into adults.

<sup>&</sup>lt;sup>f</sup> Doubling time at 30 °C is not reported since a negative  $r_m$  value would yield a negative doubling time.

 $r_m$ : intrinsic rate of increase;  $R_o$ , net reproductive rate; GT, mean generation time; DT, doubling time. <sup>a</sup> Only 1 aphid was able to reproduce at 30 °C, resulting in a negative  $r_m$  value; thus, GT and DT could not be calculated.

 $<sup>^</sup>b$  Values could not be calculated because no aphids developed at 35  $^\circ\mathrm{C}.$